

REMARKS

The Examiner's communication mailed January 28, 2005 has been received and carefully considered. In conformance with the applicable statutory requirements, this paper constitutes a complete reply and/or a bona fide attempt to advance the application to allowance. Detailed arguments in support of patentability are included herein. Reexamination and/or reconsideration of the application are respectfully requested.

Summary of the Office Action

Claims 1 and 12 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Kokaji et al. (U.S. Patent No. 4,268,872).

Claims 1 and 6 stand rejected under 35 U.S.C. § 102(b) as being anticipated by McBride (U.S. Patent No. 3,756,760).

Claims 2-5 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kokaji et al.

Claims 7-8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over McBride in view of Kokaji et al..

Claims 1-5, 9-18 and 22-24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ullman (U.S. Patent No. 3,392,896) in view of Kokaji et al.

Claims 6-8 and 19-21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ullman in view of Kokaji et al. and further in view of McBride.

**Over the Reference(s) of Record
The Claims Distinguish Patentably**

Claim 1, as amended in Applicant's Amendment of December 2, 2004, calls for a hub rotatably received on a wire feeding mechanism. Notwithstanding the Amendment, the Examiner continues to reject claim 1 as being anticipated by each of Kokaji et al. (hereinafter "Kokaji") and McBride. In the recent Office Action of January 28, 2005, the Examiner specifically indicates that claim 1 is rejected as being anticipated by Kokaji "for the reasons set forth in Paragraph 9) of the previous Office Action," referring to the Office Action of September 24, 2004. *Office Action of January 28, 2005* at pg. 2. Similarly, the Examiner indicates that claim 1 is rejected as being anticipated by McBride "for the reasons set forth in Paragraph 10) of the previous Office Action," referring to the same Office Action. *Id.*

In the Office Action of September 24, 2004, the Examiner indicated that the preamble of claim 1 calling "for use on a wire feeding mechanism" was a suggested use and therefore "of no patentable significance." *Office Action of September 24, 2004* at pg. 4. It appears that the Examiner has not taken into account the amendment to claim 1 which includes a limitation calling for the hub to be rotatably received on a wire feed mechanism. This limitation is not merely contained in the preamble, but is found in the body of the claim wherein the element of a hub is introduced.

Neither Kokaji, nor McBride, disclose a hub rotatably received on a wire feeding mechanism, as called for in claim 1. As previously brought to the Examiner's attention, Kokaji is directed toward a magnetic duplicator which, using Xerography methods, is said to automatically and quickly obtain numerous copies from a single original copy. See *Kokaji* at Col. 1, lines 6-10. McBride is directed toward equipment used for producing plastic sheet material frequently used by the greeting card industry. See *McBride* at Col. 1, lines 1-5. Without disclosure of each element of claim 1, neither of these references can be used to anticipate claim 1. See MPEP §2131 ("A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).)

Accordingly, for at least these reasons, Applicant submits that the anticipation related rejections of claim 1 are improper and should be withdrawn.

Concerning the obviousness rejection of claim 1, the Examiner continues to reject claim 1 over Ullman in view of Kokaji. The Examiner specifically states that claim 1 is rejected over this combination "for the reasons set forth in Paragraph 14) of the previous Office Action." *Office Action of January 28, 2005* at pg. 2. In the pertinent portion of paragraph 14 relating to claim 1, the Examiner states:

Ullman discloses an old and well known double-grooved wire drive roller 6, 8. It would have obvious to one of ordinary skill in the art to provide the outer surface of the rollers with a hardness plating or coating especially in view of the teaching of Kokaji et al that a hardness coating on the outer surface of a drive roller would prevent damage to and prolong the life of the roller.

Office Action of September 24, 2004 at pg. 5.

In Applicant's December 2, 2004 Amendment, Applicant argued that Ullman and Kokaji were improperly combined because (1) the references are directed toward

nonanalogous art and (2) motivation to combine the references is lacking (i.e., the Examiner has not made the required *prima facie* showing for obviousness). See *Amendment of December 2, 2004* at pgs. 7-8. Applicant expressly incorporates all the arguments contained in the December 2, 2004 Amendment herein by reference. In response to Applicant's arguments, the Examiner states "Applicant's arguments filed 12/6/2004 have been fully considered but they are not persuasive. ... Applicant further argues the combinability of Ullman and Kokaji et al as being non-analogous art since Kokaji et al is directed to a magnetic duplicator. However, the references are directed to the feeding of material using drive rollers. One of ordinary skill in the art would look to all drive rollers no matter what materials are being fed and look to various ways of making the drive roller harder in order to withstand wear." *Office Action of January 28, 2005* at pg. 3.

The Examiner appears to have only addressed Applicant's argument concerning the combination being improper due to the references being directed toward nonanalogous art. There does not appear to be a refutation of Applicant's argument concerning the absence of a motivation to combine the references of Ullman and Kokaji. In any case, Applicant continues to assert that the references are improperly combined because (1) they are directed toward nonanalogous art and (2) the references are improperly combined because motivation to combine the references is entirely lacking.

To briefly recap, Applicant asserts that because Kokaji is directed toward a magnetic duplicator and Ullman is directed toward feeding devices for feeding two wires at a time along parallel paths, the references are nonanalogous. In particular, the problem addressed in Kokaji is overcoming the defects in a conventional duplicator by applying the methods of latent image formation and development to a duplicator to automatically produce numerous copies from one document. See *Kokaji* at Col. 1, lines 48-52. This is far removed from the problem with which claim 1 is concerned.

The rollers 41,42 in Kokaji are first and foremost fixing rollers employed in duplicator 10 (i.e., a copier) for fixing a toner image onto record paper (e.g., a sheet of copy paper). Thus, the primary function of the rollers 41,42 is to "fix" a toner image transferred from the recording drum 21 to record paper 25 when passing between the rollers 41,42. See *Kokaji* at Col. 4, lines 14-36. The fixing rollers 41,42 are subjected to high pressures, specifically for improving the fixing effect of the toner onto the record paper 25. See *Kokaji* at Col. 13, lines 2-41. While lower fixing roller 42 is said to be a

drive roller arranged in parallel with recording drum 21 (Col. 13, lines 46-48), there is no indication that plating the rollers with hard chromium (as mentioned at Col. 13, lines 14-17) is done to prevent damage to and prolong the life of the roller. More likely, such plating is done to enhance the fixing effect. If done to prevent damage to and/or prolong the life of the rollers 41,42, the chromium plating is likely to be considered useful as a result of the high pressures under which the rollers operate, not useful for reducing wear associated with transporting a flimsy sheet of paper, such as record sheet 25.

In any case, the rollers 41,42 are fixing rollers, though roller 42 is indicated as also being a drive roller. There is no indication that the chromium plating added to rollers 41,42 is used to solve the problem with which the invention of claim 1 is concerned. The drive roller of claim 1 is used to advance a continuous length of wire and is not concerned with fixing a toner image on the wire. The Kokaji rollers 41,42 are used to fix a toner image on a sheet of paper 25. No one skilled in the art of wire feeding mechanisms employing drive rollers would look toward rollers used in a copier machine to primarily fix a toner image on a sheet of paper under pressure and secondarily move the sheet of paper thereby. Thus, Applicant re-asserts its argument that Ullman and Kokaji are directed toward nonanalogous art.

As mentioned in the previous Amendment, Applicant also submits that no adequate motivation to combine the references has been provided by the Examiner. In the latest Office Action, the Examiner does not appear to have addressed Applicant's argument concerning the lack of motivation (necessary for an obviousness rejection) to combine Kokaji and Ullman. In the earlier Office Action, as noted above, the Examiner did state that one of ordinary skill in the art would provide the rollers with a hardness plating or coating especially in view of the teaching of Kokaji that a hardness coating would prevent damage to and prolong the life of the roller.

However, a detailed review of Kokaji does not indicate that hard chromium plating is added to the fixing rollers 41,42 to prevent damage to and prolong the life of the roller, particularly as relates to roller 42 being a drive roller. As far as the roller 42 relates to driving (driving record paper 25, likely a sheet of flimsy copy paper), there is no indication that the plating is added to prevent damage to and prolong the life of the roller 42 due to wear caused by driving record paper 25. Rather, as discussed above, the plating is more likely intended to improve the roller as relates to its primary function: fixing, via pressure, a toner image on record sheet 25. Accordingly, Applicant submits that one skilled in the art would not look toward (i.e., would not be motivated to adapt) a

plated fixing roller that primarily fixes a toner image to a sheet of paper, but also serves to drive the sheet of paper along a path through a copier, to improve the drive roller of a wire feeder that is used to advance a continuous length of wire. Wire is much more likely to wear on a drive roller than is paper, thus the need to plate the wire feeding mechanism drive roller is not fairly related to plating of fixing rollers used to fix toner images.

In any case, the Examiner has provided no reference, or other evidence to support his conclusion that it would be obvious to one skilled in the art to modify the teachings of Ullman with the teachings of Kokaji. Applicant asserts that the Examiner has impermissibly concluded that claim 1 is obvious in view of the combination of Ullman and Kokaji without any legitimate support on the record and respectfully requests that, in accordance with the obligations imposed under MPEP § 2144.03, the Examiner provide a reference or other suitable evidence showing that one skilled in the art would be motivated to modify the teachings of Ullman with the teachings of Kokaji.

As the Examiner is certainly aware, a *prima facie* case of obviousness is not established absent proper motivation. Simply because the wire feeder rollers of Ullman could be modified to include the chromium plating disclosed in Kokaji, motivation is not present. Further, according to MPEP § 2144.01, the "fact that the claimed invention is within the capabilities of one of ordinary skill in the art is not sufficient by itself to establish *prima facie* obviousness." Merely because the claimed elements are individually found in the prior art, it does not necessarily follow that it would be obvious to combine the elements from different prior art references. See MPEP § 2141.01 citing *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993). Consequently, absent a motivation to combine and modify, it is irrelevant that the elements and/or limitations may be individually or separately known in the prior art. Clearly, the Examiner is motivated to combine the teachings of Ullman with the teachings of Kokaji for no other reason than to arrive at the invention of claim 1. This is a classic example of impermissible hindsight.

Accordingly, for all the reasons discussed in the preceding paragraphs and previously presented in the Amendment of December 2, 2004, Applicant submits that claim 1 and claims 2-11 dependent therefrom are patentably distinct over the references of record.

Dependent claims 2 and 3 respectively call for the plating of claim 1 to be a chrome alloy and the chrome alloy to have about 96% and about 97% chromium. In

conclusory fashion, the Examiner asserts that to make the chrome plating a chrome alloy "would have been an obvious design consideration to one of ordinary skill in the art since most metals are not completely made of one material when used as coatings or plating and the use of such alloys are old and well known to persons of ordinary skill in the art." *Office Action of September 24, 2004* at pg 4. The Examiner further makes the conclusory allegation that "the amount of chrome in such an alloy ... would have been obvious to one of ordinary skill in the art for the same reason. *Id.*

Applicant respectfully challenges the Examiner's obviousness rejection concerning these claims. As discussed above, a *prima facie* case of obviousness requires the Examiner to show motivation. This is the Examiner's burden. See MPEP § 706.02(j). The Examiner has not given an adequate reason to demonstrate why one skilled in the art would provide a wire feeding drive roller with a plating, particularly a plating that is a chrome alloy (claim 2) or a plating that is a chrome alloy having between about 96% and about 97% chromium. Merely stating that this is an obvious design consideration is not enough. The Examiner must show why these limitations are "obvious design considerations" and why such a design consideration is obvious to one skilled in the art.

Since such a showing is absent, Applicant submits that dependent claims 2 and 3 are each patentably distinct over the references of record, not only because they depend from claim 1 (which is asserted as being an allowable claim), but also for the reasons discussed in the preceding two paragraphs.

Dependent claim 4 calls for the plating of claim 1 to have a hardness of about Rockwell C 70 to about Rockwell C 72. The Examiner, relying on the reasoning of the Office Action of September 24, 2004, rejects claim 4 as obvious over Kokaji alone and also Ullman in view of Kokaji. Applicant respectfully asserts that claim 4 is patentably distinct over these references, not only because claim 4 depends from claim 1, but for the following reasons.

Kokaji mentions that fixing rollers 41,42 should have a high hardness, preferably higher than 60H_{RC}. *Kokaji* at Col. 13, lines 11-13. Kokaji further states, in an example, the surface of the fixing rollers is hardened into hardness of more than 61 H_{RC} and the fixing roller surface is plated with hard chromium. *Kokaji* at Col. 13, lines 14-17 (emphasis added). There is no mention of the specific hardness of the hard chromium plating. Thus, the use of Kokaji to reject dependent claim 4 (as opposed to indicating that claim 4 contains allowable subject matter) is disingenuous. Kokaji only specifies a

hardness as relates to the surface of the rollers 41,42. This surface is said to be further plated with a hard chromium. No mention of a specific hardness, such as about Rockwell C 70 to about Rockwell C 72 (called for in claim 4) is found anywhere in Kokaji.

Dependent claim 5 calls for the plating of claim 1 to have a thickness of about 0.0004 inches to about 0.0006 inches. The Examiner, again relying on the reasoning of the Office Action of September 24, 2004, rejects claim 5 as obvious over Kokaji alone and separately Ullman in view of Kokaji. Specifically, the Examiner notes that a protective coating on drum 21 of Kokaji may be in the range of 10 microns, citing Col. 7, lines 52-59 of Kokaji. *Office Action of September 24, 2004* at pg. 5. The Examiner further asserts that "it would have been obvious to one of ordinary skill in the art to make the plating on the drive roller 42 of a thickness as claimed [sic] as further taught in Kokaji et al that the thickness of the hardness plating of the recording drum 21 should be about the same thickness [sic]." *Id.* Applicant respectfully disagrees.

As discussed in Column 3, lines 45-68 and Column 4, lines 1-36 of Kokaji, the recording drum 21 disclosed in Kokaji is used to receive a latent image thereon from magnetic head 22. The latent image typically corresponds to a image to be produced on a sheet of print media, such as record paper 25 (often the image to be produced is copied from an original document). The latent image is then developed by toner development device 23 which essentially applies toner to the latent image thereby creating a toner image on the drum 21. The toner image is then transferred to the record paper 25. The record paper 25 with the toner image thereon then passes through fixing rollers 41,42 wherein the toner image is permanently affixed (or "fixed") to the record paper prior to the record paper being delivered to an output tray. Before receiving another latent image on the drum 21, residual toner is removed from the drum 21 by a cleaning blade 46 and the latent image is erased by erasing head 48.

The drum 21 is not a driving roller, i.e., it does not drive the record sheet 25 along path 27. Thus, the discussion concerning a protecting film on the drum 21 (at column 7, lines 52-57) is not relevant to the fixing rollers 41,42, including fixing roller 42 which also serves as a drive roller for record paper 25. Accordingly, Applicant submits that claim 5 is separately patentably distinct over the references of record for this additional reason.

Claims 6-8 dependent from claim 1 (and claims 19-21 dependent from claim 12) call for the plating of claim 1 (or claim 12) to be a nickel plating. Claims 7 and 20 call for

the nickel plating to have a hardness of approximately Rockwell C 60. Claims 8 and 21 call for the plating to have a thickness of about 0.0001 to about 0.0030 inches. The Examiner rejected these claims over the triple-combination of Ullman, McBride and Kokaji (Claim 6 was also rejected as being anticipated by McBride, but Applicant relies on the argument presented with respect to claim 1 to overcome the §102 rejection of claim 6. That is, claim 1 calls for a hub rotatably received on a wire feeding mechanism and McBride fails to disclose such a hub).

Applicant asserts that this triple combination of references is improper. As already discussed, Applicant asserts that the combination of Ullman and Kokaji is improper for at least the reasons of being directed toward nonanalogous art and lacking motivation to combine. The arguments presented above in reference to claim 1 are applicable to the combination of these references as applied to claims 6-8 and 19-21 and, accordingly, are incorporated into this paragraph by reference. The addition of McBride does not render the combination proper, but rather improperly adds a third reference. Like Ullman and Kokaji, Applicant asserts that McBride is directed toward nonanalogous art (moving a plastic sheet material used by the greeting card industry is not remotely similar to wire feeding mechanisms) and asserts that motivation to add McBride is lacking.

For at least these reasons, Applicant asserts that dependent claims 6-8 and 19-21 are patentably distinct over the references of record, not only because they depend from independent claims that are asserted herein as being allowable (claim 1 above and claim 12 below), but for the reasons discussed in the preceding two paragraphs.

Claim 12 continues to call for a plating to be on an outer surface of a drive roller hub for use in a wire feeding mechanism. Claim 12 further calls for the plating to tangentially and compressively contact an associated continuous length of wire to advance said wire through the wire feeding mechanism. Like claim 1, the Examiner first rejects claim 12 as being anticipated by Kokaji alone. In the recent Office Action, the Examiner specifically indicates that claim 12 is rejected as being anticipated by Kokaji "for the reasons set forth in Paragraph 9)" of the Office Action of September 24, 2004. *Office Action of January 28, 2005* at pg. 2.

Paragraph 9 of the September 24, 2004 Office Action indicates that the preamble of claim 12 calling "for use on a wire feeding mechanism" was a suggested use and therefore "of no patentable significance." *Office Action of September 24, 2004* at pg. 4. The Examiner appears to be completely ignoring the limitation in the body of the claim

calling for the plating to tangentially and compressively contact an associated continuous length of wire. Like the limitation in claim 1, this limitation is not merely contained in the preamble, nor does this limitation merely suggest a use. Rather, this limitation expressly calls for the plating of claim 12 to tangentially and compressively contact an associated continuous length of wire.

Since Kokaji is not remotely concerned with a wire feeding mechanism, it is not surprising that the roller 42 disclosed therein fails to include a plating that tangentially and compressively contacts an associated continuous length of wire. Since this express limitation, which is contained in the body of the claim and is not merely a suggested use, is entirely missing from Kokaji, Applicant submits that Kokaji cannot be used to anticipate claim 12. Accordingly, for at least this reason, Applicant submits that the anticipation rejection of claim 12 under Kokaji is improper and should be withdrawn.

Like claim 1, claim 12 was also rejected as being obvious over the combination of Ullman and Kokaji. As discussed at length herein, Applicant challenges the properness of the Ullman and Kokaji combination on grounds that the references are directed toward nonanalogous art and that adequate motivation to combine these references has not been shown. Applicant's arguments concerning these references being directed toward nonanalogous art and the failure to show proper motivation to combine these references, discussed at length above, are incorporated herein in response to the Examiner's obviousness rejection concerning claim 12.

For at least these reasons, Applicant submits that claim 12 and claims 15-24 dependent therefrom are in condition for allowance.

Dependent **claims 15-18** are respectfully submitted by Applicant as containing allowable subject matter in addition to that contained in parent claim 12 (which is asserted as being allowable). Specifically, for at least the reasons discussed at length concerning dependent claims 2-5, Applicant submits that these claims distinguish patentably over the references of record.

Additionally, Applicant notes that claim 15 depends from independent claim 12, claim 16 depends from claim 15, claim 17 depends from claim 16 and claim 18 depends from claim 17. Thus, for example, claim 18 requires the drive roller of claim 13 to include a plating that is a chrome alloy having between about 96% and about 97% chromium, a hardness of about Rockwell C 70 to about Rockwell C 72, and a thickness of about 0.0004 to about 0.0006 inches. The Examiner's position appears to be that not only are each of these limitations obvious alone, but also this entire combination of

limitations is obvious. Applicant requests the Examiner specifically explain how this particular combination of limitations is obvious and similarly explain how each combination of limitations in claim 15-17 is obvious.

The Examiner's position concerning claim 18 appears to be that (1) it is obvious to combine Ullman and Kokaji to provide a drive roller on a wire feeding mechanism having a plating; (2) it is further obvious for the plating to be a chrome alloy; (3) it is still further obvious for the plating to be a chrome alloy having between about 96% chrome and about 97% chrome; (4) it is also obvious for the chrome plating to have a hardness of about Rockwell C 70 to about Rockwell C 72; **AND** (5) it is additionally obvious for the chrome plating to have a thickness of about 0.0004 inches to about 0.0006 inches. Thus, there appears to be at least five (5) separate obvious determinations by the Examiner. No motivation to modify the drive roller of Ullman in such a manner is provided. Nor is a motivation provided for any of claims 15-17. Accordingly, Applicant respectfully submits that each of these claims (claims 15-18) contain allowable subject matter, in addition to that contained in independent claim 12.

Claim 13 was rejected only as being obvious over Ullman in view of Kokaji. Like claims 1 and 12, Applicant challenges the combination of references applied against claim 13 and asserts that the combination is improper. Applicant's arguments concerning these references being directed toward nonanalogous art and the failure to show proper motivation to combine these references, discussed at length above, are incorporated herein in response to the Examiner's obviousness rejection concerning claim 13. For at least these reasons, Applicant submits that claim 13 and claim 14 dependent therefrom are in condition for allowance.

Dependent claim 24, which was amended in the Amendment of December 2, 2004, calls for the drive roller of claim 22 to include a groove that is V-shaped. The Examiner rejects claim 24 as being obvious over Ullman in view of Kokaji. Applicant's review of Ullman fails to reveal a teaching or fair suggestion of a V-shaped groove in a drive roller. The addition of Kokaji does nothing to correct this deficiency. Accordingly, Applicant submits that claim 24 is patentably distinct over the references of record, not only because it depends from allowable claim 13, but for this additional reason.

CONCLUSION

All formal and informal matters having been addressed, it is respectfully submitted that this application is in condition for allowance. Alternatively, if the

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Examiner is of the view that the application is not in clear condition for allowance, it is requested that he telephone the undersigned for purposes of conducting a telephone interview to resolve any outstanding differences. In any case, an early notice of allowance is earnestly solicited.

Respectfully submitted,

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April 28, 2005

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